

SURGICAL DEVICES HAVING A BIODEGRADABLE MATERIAL
WITH A THERAPEUTIC AGENT

Abstract

Surgical devices such as implants or suture fastenings are assembled from a plurality of discrete components, one of which components includes a heat bondable plastic material for bonding the components together. At least two components are bonded to each other by the applying heat to the heat bondable plastic material of one component. The heat bondable plastic material is preferably a polymeric or composite material suitable for surgical applications and implantation in humans, and may be a biodegradable material. A laser may be used as the heat source. The present invention is advantageously embodied in heat bonded fastenings for sutures or K-wires, in which a variety of different suture anchors are usable, including expandable distal suture anchors. Other embodiments include a metal bone plate which is held to bone by a metal bone screw and a nut of bondable material bonded to the plate to secure the connection; a piece of bondable material bonded to a metal prosthesis to custom fit the prosthesis; and a surgical implant custom formed by bonding together a plurality of discrete elements one or more of which is bondable.